

SECTION

6.2

PROCESS OF MEIOSIS

Power Notes

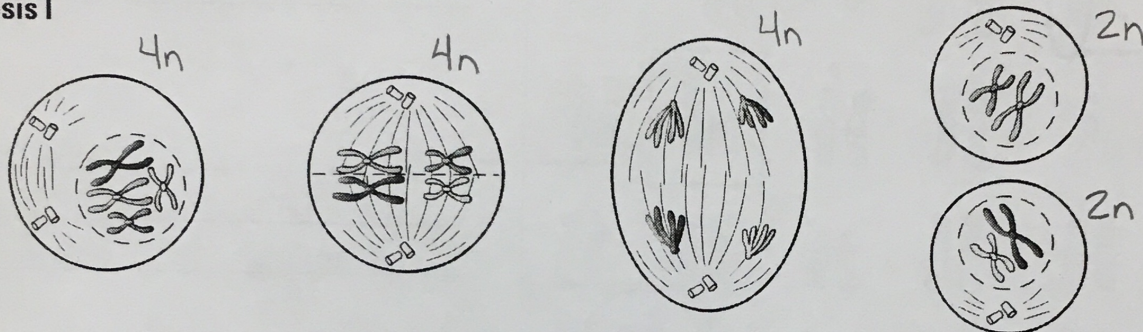
Homologous chromosomes:

- Pair of chromosomes
- 1 mom + 1 dad
- Same info on each
- ✗ Separate in meiosis I

Sister chromatids:

- Duplicate of chromosome
MM or FF
- Joined by centromere
- ✗ Separate in meiosis II

Meiosis I



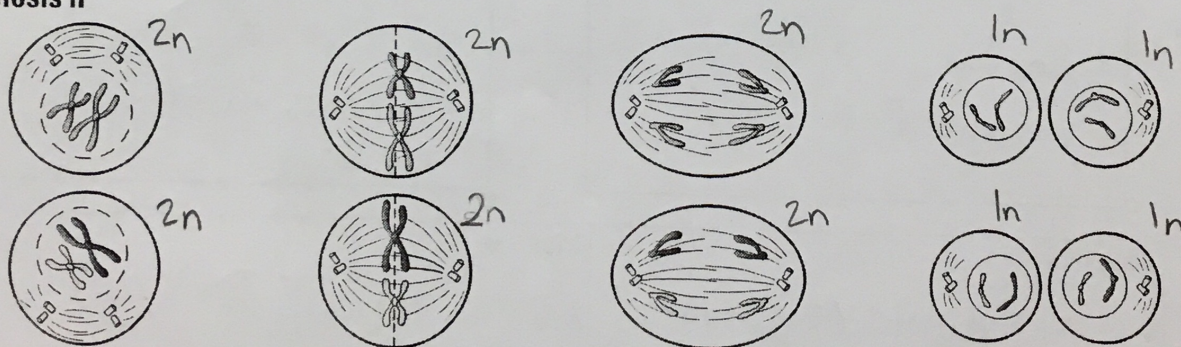
1. Prophase I:
Chromosomes
condense

2. Metaphase I:
Homologous
chromosomes
line up at
equator

3. Anaphase I:
Homologous
chromosomes
separate

4. Telophase I:
nuclear envelope
forms +
cytokinesis

Meiosis II



5. Prophase II:
nuclear
envelope
dissolves

6. Metaphase II:
Sister chromatids
line up at
equator

7. Anaphase II:
Sister
chromatids
separate

8. Telophase II:
nuclear envelope
forms +
cytokinesis

outcome = 4 haploid daughter cells

SECTION

6.1

CHROMOSOMES AND MEIOSIS

Power Notes

Somatic cells:

- All Body cells (ex skin, heart)
- Reproduce via mitosis

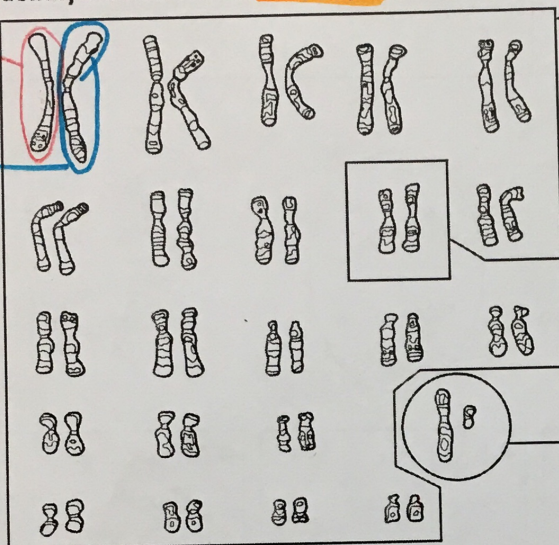
Gametes:

- Sex cells (egg & sperm)
- Reproduce via meiosis

Identify the items in the **karyotype** and explain their characteristics.

Mom

Dad



1. Autosomes... Chromosomes that do not determine sex
22 pairs

2. Homologous Chromosomes
pair of the same chromosome
1 mom + 1 dad

3. Sex Chromosomes - determines sex
XX + XY

n = number of copies

Diploid cell:

- 2 copies of chromosomes
- $2n$
- Somatic Cells

Haploid cell:

- 1 copy of chromosomes
- n
- Gametes made via meiosis

Mitosis

- make diploid ($2n$) cells
- Genetically identical
- makes somatic cells
- Asexual reproduction

→ No variation

Meiosis

- Make haploid (n) cells
- Genetically unique
- Makes gametes
- Sexual reproduction

→ a lot of variation